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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,583	02/05/2001	Karl-Hermann Schlingensiepen	P66141US0	7033

136 7590 04/04/2005

JACOBSON HOLMAN PLLC
400 SEVENTH STREET N.W.
SUITE 600
WASHINGTON, DC 20004

EXAMINER

ZARA, JANE J

ART UNIT	PAPER NUMBER
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1635

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,583

Applicant(s)

SCHLINGENSIEPEN ET AL.

Examiner

Jane Zara

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-25-01</u> . | 6) <input type="checkbox"/> Other: <u>See</u> |

DETAILED ACTION

This Office action is in response to the communication filed 1-14-05.

Claims 1-11 are pending in the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments and Amendments

Withdrawn Rejections

Any rejections not repeated in this Office action are hereby withdrawn.

Maintained Rejections

Claims 1-4, 7, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fakhrai et al for the same reasons of record set forth in the Office action mailed 7-14-04.

Applicant's arguments filed 1-14-05 have been fully considered but they are not persuasive. Applicants argue that Fakhrai does not anticipate the instantly claimed invention because this reference does not explicitly disclose a combination of both an inhibitor of an immunosuppressant and an immunostimulator as a medicament. Contrary to Applicant's assertions, the claimed invention is drawn to compositions for the treatment of neoplasms comprising at least one inhibitor of an immune suppressor (e.g. antisense targeting and inhibiting the expression of TGF-beta or its receptors) and one immune stimulator. Fakhrai teaches the administration of glioma cells that have

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been transfected with antisense which target and inhibit the expression of a nucleic acid encoding a TGF-beta molecule (see p. 2909 or Fakhrai, left col., "Glioma cells express major histocompatibility complex class I and class II molecules... as well as tumor-associated antigens that have been demonstrated to stimulate anti-tumor immune responses and thus are good tumor vaccine candidates... However, several studies have demonstrated the secretion of an immunosuppressive factor by glioma cells that was subsequently identified as transforming growth factor [beta]." Therefore, by administering these anti-TGF-beta- antisense transfected, tumor antigen-expressing, glioma cells to organisms which are afflicted to brain tumors, Fakhrai anticipates the instantly claimed invention.

Claims 1-4, 7, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Caniggia et al for the same reasons of record set forth in the Office action mailed 7-14-04. Applicants argue that Caniggia does not qualify as prior art for several reasons. These reasons include the fact that the Caniggia reference (USPN 6,376,199) has a 102(e) date of Dec. 21, 1999. Applicants are correct that this date has been provided as the 102(e) date of USPN 6,376,199, which claimed priority to the PCT document WO98/40747. But the priority data for USPN 6,376,199 includes the provisional document 60/039,919, filed on 3-7-97. This provisional document predates the priority date of the instantly claimed invention. Moreover, the provisional application, on pp. 12-13, provides the teaching that anticipates the instant invention:

The compositions of the invention contain at least one inhibitor or stimulator of a cytokine of the TGF-beta family or receptors of cytokines of

the TGF-beta family, preferably an inhibitor of TGF-beta3 or its receptor, alone or together with other active substances... The compositions of the invention may be administered together with or prior to administration of other biological factors that have been found to affect trophoblast proliferation. Examples of these factors include IL-11... and G-CSF, GM-CSF and M-CSF...

Applicants argue that the language in Caniggia, which describes combining medicaments (e.g. cited above), is rather vague and therefore does not anticipate the claimed invention. Contrary to Applicant's assertions, the language of Caniggia clearly describes the option of administering compositions that combine antisense that target immunosuppressive agents including TGF-beta with immunostimulatory agents, including IL-11, G-CSF-GM-CSF and M-CSF.

New Rejections

Claim Objections

Claim 8 is objected to because of the following informalities: in line 5, "interleukins" is a misspelling. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5 and 7-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to a pharmaceutical composition comprising at least one inhibitor of the effect of a substance that negatively effects an immune response, which substance is selected from TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors, and which inhibitor inhibits the synthesis or function of the negative effector of an immune response, and which composition further comprises at least one stimulator positively effecting an immune response, which stimulator is enhancing the synthesis and/or function of factors selected from GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs but not essential for the organism or fusion of dendritic and tumor cells. The specification and claims do not indicate or adequately describe elements essential to the genera claimed, which genera include the negative effectors and stimulators claimed. The specification and claims do not indicate the distinguishing attributes concisely shared by the members of the genera comprising these negative effectors or stimulators. The disclosure does not clarify the common attributes that are encompassed by inhibitors of the synthesis or function of negative effectors of the immune system, and which negative effectors are selected from the group comprising

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TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors. The disclosure does not clarify the common attributes encompassed by stimulators that enhance the synthesis and/or function of GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs but not essential for the organism or fusion of dendritic and tumor cells.

Furthermore, the disclosure does not adequately describe the attributes or concise characteristics encompassed by the genera comprising antigens, tumor or pathogenic antigens, or organ specific antigens expressed in affected organs but not essential for the organism or fusion of dendritic and tumor cells. Thus the scope of the claims includes numerous structural variants and the genera are highly variant because a significant number of structural differences between members of a given genus is permitted. Concise structural features that could distinguish structures or compounds within a genus from others are missing from the disclosure and the claims. The general knowledge and level of skill in the art do not supplement the omitted description because specific, not general guidance is what is needed. The specification fails to teach or adequately describe a representative number of species in each genera such that the common attributes or characteristics concisely identifying members of each proposed genera are exemplified. And because each genus is so highly variant, the description provided is insufficient. One of skill in the art would reasonably conclude that the disclosure fails to provide a representative number of species to describe the various genera claimed. Thus, Applicant was not in possession of the claimed genera.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5 and 7-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the in vitro inhibition of TGF-beta expression comprising the administration of antisense oligonucleotides, and for treating a brain neoplasia comprising the administration of an antisense and IL-2, which antisense targets and inhibits the expression of TGF-beta 2 as taught previously by Fakhrai et al, does not reasonably provide enablement for the targeting and inhibition of the TGF-beta family in vivo using antisense of SEQ ID NO: 7 or optionally in combination with a tumor cell extract, and which provides for treatment effects for neoplasia in an organism. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The claims are drawn to therapeutic (pharmaceutical) compositions for treating any neoplasm comprising the antisense oligonucleotide of SEQ ID NO: 7, or comprising at least one inhibitor of the effect of a substance that negatively effects an immune response, which substance is selected from TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors, and which inhibitor inhibits the synthesis or function of the negative effector of an immune response, and which composition further comprises at least one stimulator positively effecting an immune

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response, which stimulator enhances the synthesis and/or function of factors selected from GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs but not essential for the organism or fusion of dendritic and tumor cells.

The state of the prior art and the predictability or unpredictability of the art.

The following references are cited herein to illustrate the state of the art of nucleic acid treatment in organisms. Branch and Crooke teach that the in vivo (whole organism) application of nucleic acids (such as antisense) is a highly unpredictable endeavor due to target accessibility and delivery issues. Crooke also points out that cell culture examples are generally not predictive of in vivo inhibition of target genes. (A. Branch, Trends in Biochem. Sci. 23: 45-50; see entire text for Branch; S. Crooke, Antisense Res. and Application, Chapter 1, pp. 1-50, especially at 34-36).

Likewise, Peracchi cautions investigators in the field of gene therapy about the problems of achieving in vivo efficacy using oligonucleotide based approaches. Peracchi cites stability and delivery obstacles that need to be overcome in achieving desired in vivo efficacy: "A crucial limit of ribozymes in particular, and of oligonucleotide-based drugs in general, lies in their intrinsically low ability to cross biological membranes, and therefore to enter the cells where they are supposed to operate... cellular uptake following systemic administration appears to require more sophisticated formulations... the establishment of delivery systems that mediate

efficient cellular uptake and sustained release of the ribozyme remains one of the major hurdles in the field.” (A. Peracchi et al, Rev. Med. Virol., 14: 47-64, especially at 51).

Agrawal et al also speak to the unpredictable nature of the nucleic acid based therapy field thus: It is therefore appropriate to study each ... oligonucleotide in its own context, and relevant cell line, without generalizing the results for every oligonucleotide.” (S. Agrawal et al., Molecular Med. Today, 6: 72-81 at 80). Cellular uptake of oligonucleotides by appropriate target cells is another rate limiting step that has yet to be overcome in achieving predictable clinical efficacy using antisense.” Both Chirila et al and Agrawal et al point to the current limitations which exist in our understanding of the cellular uptake of ... oligonucleotides in vitro and in vivo (see Agrawal et al especially at pages 79-80; see Chirila et al., Biomaterials, 23: 321-342 in its entirety, especially at 326-327 for a general review of the important and inordinately difficult challenges of the delivery of therapeutic oligonucleotides to target cells).

The amount of direction or guidance presented in the specification AND the presence or absence of working examples. Applicants have not provided guidance in the specification toward a method of treating any neoplasm in an organism comprising the administration of any antisense, or comprising the administration of any inhibitor of the effect of a substance that negatively effects an immune response, which substance is selected from TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors, and which inhibitor inhibits the synthesis or function of the negative effector of an immune response; nor have Applicants provided guidance in the specification toward a method of treating any neoplasm in an organism

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comprising the co-administration of at least one stimulator positively effecting an immune response, which stimulator enhances the synthesis and/or function of factors selected from GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs but not essential for the organism or fusion of dendritic and tumor cells. The specification teaches the in vitro inhibition of TGF-beta expression using antisense. The specification also teaches the in vitro lysis of tumor cells following administration of antisense, GM-CSF and IL-4. One skilled in the art would not accept on its face the examples given in the specification of the in vitro inhibition of TGF-beta expression using antisense, or the in vitro lysis of tumor cells following administration of GM-CSF and IL-4 as being correlative or representative of the successful treatment of any neoplasia in an organism in view of the lack of guidance in the specification and known unpredictability associated with inhibition of a target gene in an organism using antisense and optionally additionally using tumor cell extract and further whereby treatment effects are provided for any neoplasia in that organism.

The breadth of the claims and the quantity of experimentation required.

The breadth of the claims is very broad. The claims are drawn to therapeutic (pharmaceutical) compositions for treating any neoplasm comprising the antisense oligonucleotide of SEQ ID NO: 7, or comprising at least one inhibitor of the effect of a substance that negatively effects an immune response, which substance is selected from TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors, and which inhibitor inhibits the synthesis or function of the negative

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effector of an immune response, and which composition further comprises at least one stimulator positively effecting an immune response, which stimulator enhances the synthesis and/or function of factors selected from GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs, but not essential for the organism or fusion of dendritic and tumor cells.

The quantity of experimentation required to practice the invention as claimed would require the *de novo* determination of accessible target sites, modes of delivery and formulations to target appropriate cells and /or tissues harboring the target TGF-beta sequence for antisense of SEQ ID NO: 7 in combination with administration of a tumor cell extract) whereby TGF-beta family gene expression is inhibited in cells in vivo and treatment effects are provided for any neoplasia. Also required for enabling the full scope claimed would be the *de novo* determination of accessible target sites, modes of delivery and formulations to target appropriate cells and/or tissues harboring a substance that negatively effects an immune response, which substance is selected from TGF-beta and its receptors, VEGF and its receptors, IL-10 and its receptors, PGE-2 and its receptors, whereby the synthesis or function of the negative effector of the immune response is inhibited upon administration of an inhibitor, and further whereby the synthesis and/or function of factors selected from GM-CSF, SCF, CSF, IFN, FLT-3-ligand, monocyte chemotactic proteins, IL-2, IL-4, IL-12 and/or IL-18, a virus, viral antigen, tumor or pathogenic antigen, or organ specific antigens expressed in affected organs, but not essential for the organism or fusion of dendritic and tumor cells, is

stimulated upon administration of a stimulator, and treatment effects for neoplasia are provided. Since the specification fails to provide any particular guidance for targeting appropriate cells harboring the target TGF-beta genes using antisense of SEQ ID NO: 7 in an organism, nor for providing any of the claimed inhibitory and stimulatory affects, whereby treatment effects for any neoplasia are provided, and since determination of these factors is highly unpredictable, it would require undue experimentation to practice the invention over the broad scope claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5, 7,8, 10 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Schlingensiepen et al.

Schlingensiepen et al (WO 98/33904) teach pharmaceutical compositions comprising at least one inhibitor of an immune suppressor (e.g. antisense targeting and inhibiting the expression of TGF-beta or its receptors) and one immune stimulator (see pages 1, 2, 15, 27, figure 3-9, claims 12-15, and the accompanying sequence alignment data between SEQ ID NO: 528 of WO 98/33904 and SEQ ID NO: 7 of the instant application).

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-5, 7, 8, 10 and 11 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 12-15 of copending Application No. 10/984,919. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. Both sets of claims are drawn to pharmaceutical compositions comprising at least one inhibitor of an immune suppressor (e.g. antisense targeting and inhibiting the expression of TGF-beta or its receptors) and one immune stimulator (see accompanying sequence alignment data of SEQ ID NO: 528 of 10/984,919 and SEQ ID NO. 7 of the instant application: They are the same oligonucleotide).

Conclusion

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94

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(December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone number for the Group is **703-872-9306**. NOTE: If Applicant *does* submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jane Zara** whose telephone number is **(571) 272-0765**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, can be reached on (571) 272-0760. Any inquiry regarding this application should be directed to the patent analyst, Katrina Turner, whose telephone number is (571) 272-0564. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JZ TC 1600

Tue Mar 8 14:45:12 2005

; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-701-583A-7

Query Match 100.0%; Score 19; DB 32; Length 19;
Best Local Similarity 100.0%; Pred. No. 69;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GTCATTTTGTAAACCTCC 19
|||
Db 1 GTCATTTTGTAAACCTCC 19

RESULT 4

US-10-984-919-528
; Sequence 528, Application US/10984919
; GENERAL INFORMATION:
; APPLICANT: Schlingensiepen, Karl-Hermann
; APPLICANT: Brysch, Wolfgang
; TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDE PREPARATION METHOD
; FILE REFERENCE: 10496/P63763USO
; CURRENT APPLICATION NUMBER: US/10/984,919
; CURRENT FILING DATE: 2004-11-10
; PRIOR APPLICATION NUMBER: US/09/341,700
; PRIOR FILING DATE: 1999-09-24
; PRIOR APPLICATION NUMBER: PCT/EP98/00497
; PRIOR FILING DATE: 1998-01-30
; PRIOR APPLICATION NUMBER: EP 97 101 531.8
; PRIOR FILING DATE: 1997-01-31
; NUMBER OF SEQ ID NOS: 1764
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 528
; LENGTH: 19
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: antisense oligonucleotide
US-10-984-919-528

Query Match 100.0%; Score 19; DB 67; Length 19;
Best Local Similarity 100.0%; Pred. No. 69;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GTCATTTTGTAAACCTCC 19
|||
Db 1 GTCATTTTGTAAACCTCC 19

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OW nucleic - nucleic search, using sw model

Run on: March 8, 2005, 10:14:31 ; Search time 1443 Seconds
(without alignments)
638.010 Million cell updates/sec

Title: US-09-701-583a-7

Perfect score: 19
Sequence: 1 gtcattttgtaacctcc 19

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4708233 seqs, 24227607955 residues

Total number of hits satisfying chosen parameters: 1981570

Minimum DB seq length: 0
Maximum DB seq length: 60

Post-processing: Maximum Match 0%
Listing first 45 summaries

Database :

GenBank: 1: gb_ba: 2: gb_bhg: 3: gb_in: 4: gb_om: 5: gb_ov: 6: gb_pat: 7: gb_ph: 8: gb_pl: 9: gb_pr: 10: gb_ro: 11: gb_scs: 12: gb_sy: 13: gb_un: 14: gb_vi:

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	19	100.0	19	6	A88380 Sequence 52
2	19	100.0	19	6	A90347 Sequence 52
3	19	100.0	19	6	BD234903 A method
4	19	100.0	19	6	AX008974 Sequence
5	19	100.0	19	6	BD065893 An antisense
6	19	100.0	27	6	AX113805 Sequence
7	16	84.2	20	6	A88381 Sequence 52
8	16	84.2	20	6	A90348 Sequence 52
9	16	84.2	20	6	BD234904 A method
10	16	84.2	20	6	AX008975 Sequence
11	16	84.2	20	6	BD065894 An antisense
12	14.2	74.7	50	6	CQ654733 Sequence
13	14.2	74.7	50	6	CQ002802 Sequence
14	14.2	74.7	60	6	CQ548820 Sequence
15	13.8	72.6	25	6	AX043439 Sequence
16	13.6	71.6	41	6	AX518217 Sequence
17	13.2	69.5	30	6	AX704643 Sequence
18	13.2	69.5	51	6	AR355892 Sequence
19	13.2	69.5	51	6	AR537448 Sequence

C	20	13.2	69.5	51	6	AX160293	AX160293 Sequence
C	21	13.2	69.5	54	6	AR144898	AR144898 Sequence
C	22	13.2	69.5	54	6	BD177972	BD177972 Process f
C	23	13.2	69.5	54	6	AX329069	AX329069 Sequence
C	24	13.2	69.5	56	6	AX704638	AX704638 Sequence
C	25	13.2	69.5	60	6	CQ552489	CQ552489 Sequence
C	26	13.2	69.5	47	6	AR284755	AR284755 Sequence
C	27	12.8	67.4	30	6	BD225600	BD225600 Assay for
C	28	12.6	66.3	25	6	AX115676	AX115676 Sequence
C	29	12.6	66.3	45	6	II1435	II1435 Sequence 3
C	30	12.6	66.3	47	6	AR031826	AR031826 Sequence
C	31	12.6	66.3	47	6	AR031829	AR031829 Sequence
C	32	12.6	66.3	51	6	AX115677	AX115677 Sequence
C	33	12.6	66.3	53	1	AP195100	AP195100 Sulfolobu
C	34	12.6	66.3	60	6	AR144894	AR144894 Sequence
C	35	12.6	66.3	60	6	BD177968	BD177968 Process f
C	36	12.6	66.3	60	6	AX329065	AX329065 Sequence
C	37	12.4	65.3	19	6	AR092763	AR092763 Sequence
C	38	12.4	65.3	19	6	AR359145	AR359145 Sequence
C	39	12.4	65.3	19	6	AX132003	AX132003 Sequence
C	40	12.4	65.3	19	6	AX132004	AX132004 Sequence
C	41	12.4	65.3	20	6	A97447	A97447 Sequence 3
C	42	12.4	65.3	20	6	BD080867	BD080867 Gene sequ
C	43	12.4	65.3	26	6	AX320336	AX320336 Sequence
C	44	12.4	65.3	30	6	AR228380	AR228380 Sequence
C	45	12.4	65.3	44	6	E55471	E55471 Gene expres

ALIGNMENTS

RESULT 1	A88380	Sequence 528 from Patent WO9833904.	19 bp	DNA	linear	PAT 22-JAN-2000
LOCUS	A88380	1	GI:6736950			
DEFINITION	A88380	1 (bases 1 to 19)				
ACCESSION	A88380	unclassified.				
VERSION	A88380	unclassified.				
KEYWORDS		unclassified.				
SOURCE		unclassified.				
ORGANISM		unclassified.				
REFERENCE		1 (bases 1 to 19)				
AUTHORS		Brysch, W. and Schlingensiefen, K.				
TITLE		AN ANTISENSE OLIGONUCLEOTIDE PREPARATION METHOD				
JOURNAL		Patent: WO 9833904-A 528 06-AUG-1998;				
FEATURES		BIOINFORMATICS (DE); BRYSCH WOLFGANG (DE)				
source		Location/Qualifiers				
		1..19				
		/organism="unclassified"				
		/mol_type="unassigned DNA"				
		/db_xref="taxon:32644"				
ORIGIN						
Query Match		100.0%; Score 19; DB 6; Length 19;				
Best Local Similarity		100.0%; Pred. No. 1.3e+03;				
Matches		19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;				
QY		1 gtcattttgtaacctcc 19				
DB		1 gtcattttgtaacctcc 19				
RESULT 2	A90347	Sequence 528 from Patent EP0856579.	19 bp	DNA	linear	PAT 22-JAN-2000
LOCUS	A90347	1	GI:6738861			
DEFINITION	A90347	unclassified.				
ACCESSION	A90347	unclassified.				
VERSION	A90347	unclassified.				
KEYWORDS		unclassified.				
SOURCE		unclassified.				
ORGANISM		unclassified.				
REFERENCE		1 (bases 1 to 19)				